NAVSEA DAHLGREN

BULOVA TECHNOLOGIES LLC

MK 432 ELECTRONIC TIME FUZE

A New Fuze for the US Navy

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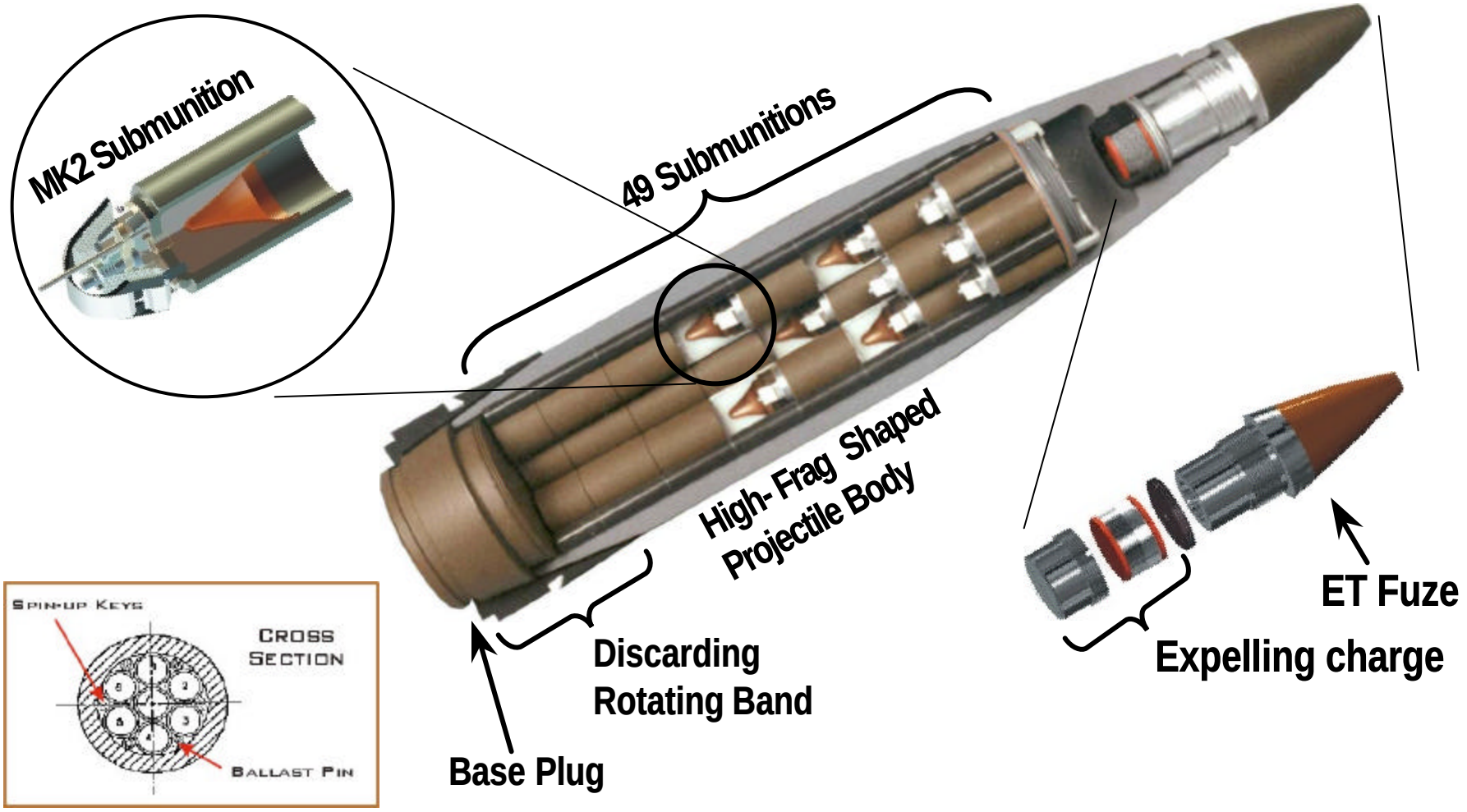
TACOM

Mobility and Firepower for America's Army

Navy 5” Cargo Projectile EX 172 HE-ICM

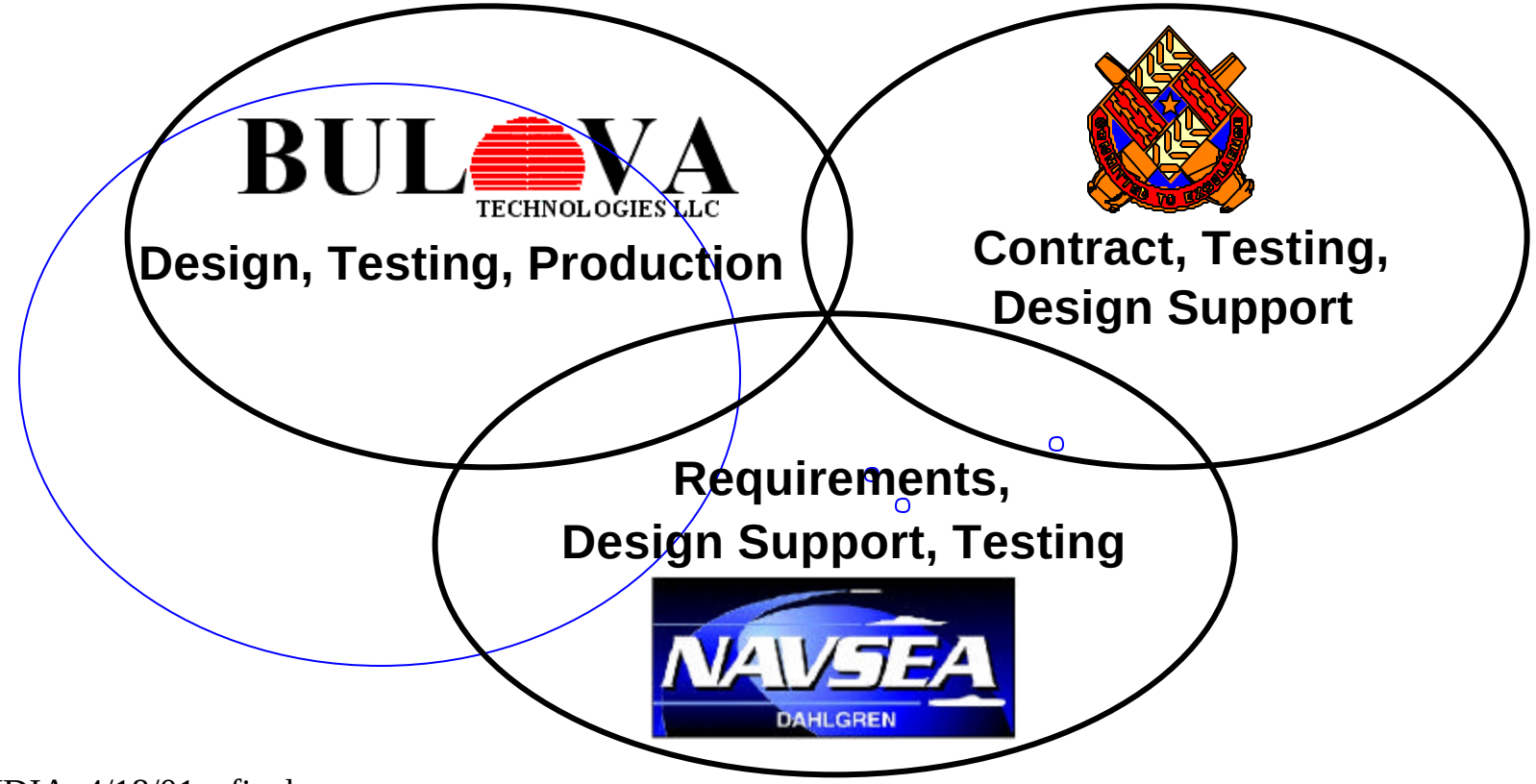


Fuze Alternatives

	MK 429 MFF	Simplified MK 429	Modified MOFA	Modified M762A1
Development Cost	None	$1,000,000+	$1,000,000+	$1,000,000+
Projectile Compatibility	Proven	Proven	TBD	Proven
Overhead Safety	Acceptable	Acceptable	TBD	Excellent
Unit Cost	High	Medium	Low	Lowest
Total Cost 14,600 Fuzes	High	High	Medium	Low

Team Approach

- **Take Advantage of M762A1 MCP in Process**
- **Amended Army's MCP Contract on May 2000**



Requirements

- **Three Major Changes to M762A1 Fuze:**
  - **Compatibility w/ Gun Weapon System**
    - **Inductive Set Changes**
  - **Battery Activation**
    - **From Activate on Set to Activate at Gun Launch**
  - **Targets**
    - **Increased Timer Precision**

Inductive Set Changes

M762A1

- PIAFS Setter
- 19 Bit Message
- Single Set Mode
- Time Resolution
  - 0.1 Second

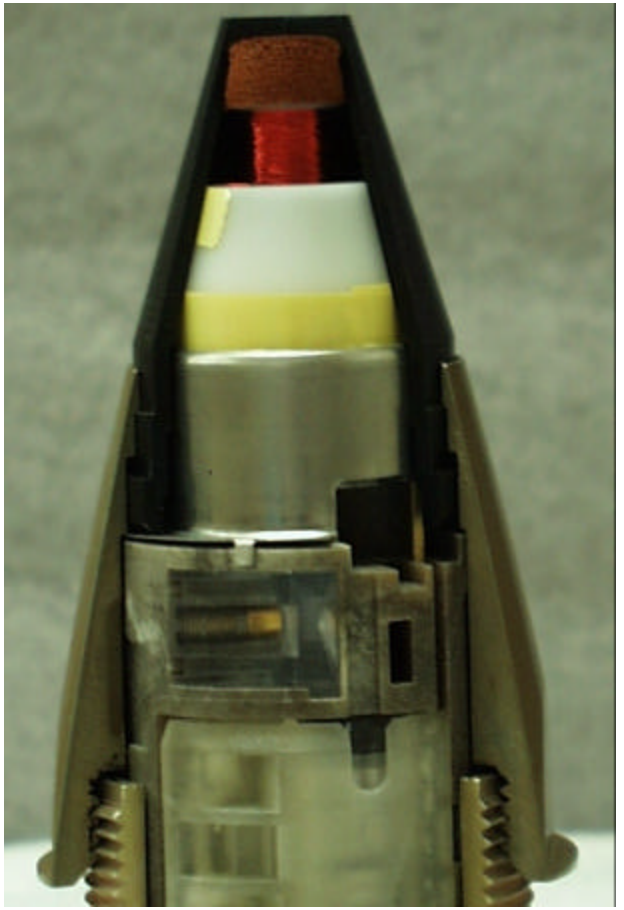
MK 432

- MK 34 Setter
- 26 Bit Message
- Continuous Set Mode
- Time Resolution
  - 0.01 Second

Inductive Set Changes

M762A1

MK 432

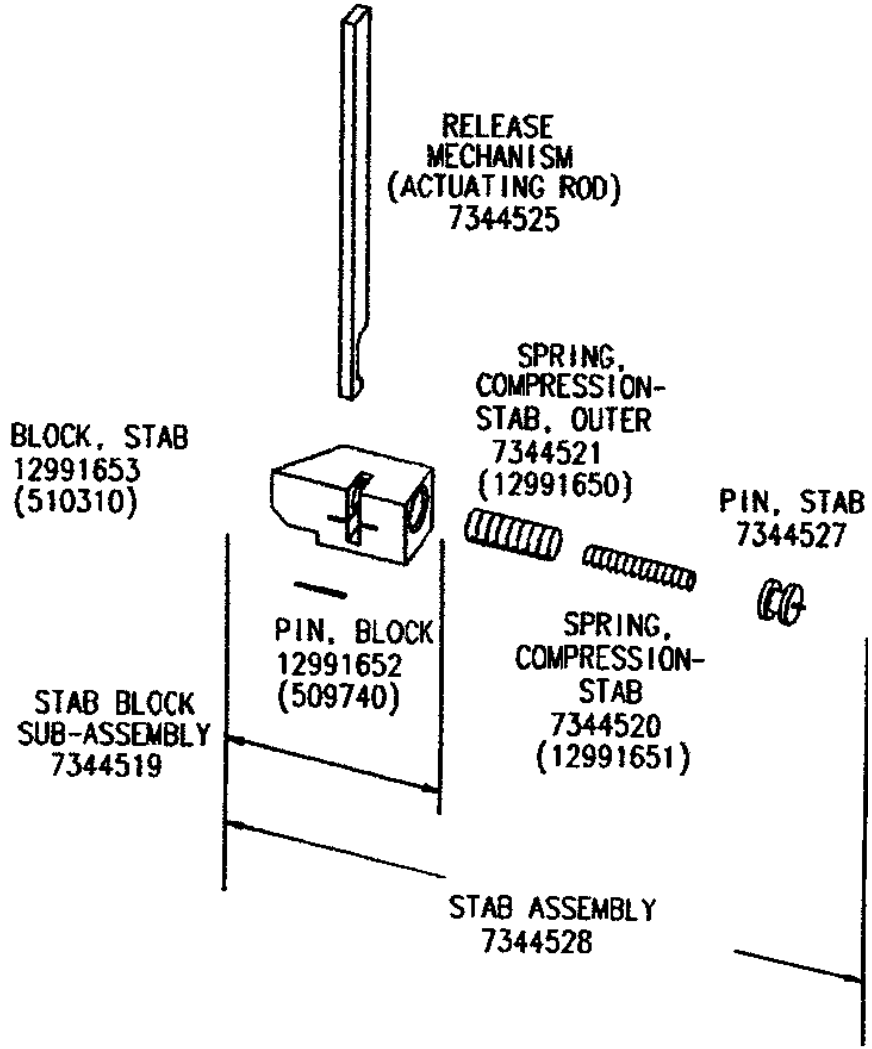


Battery Activation

- **M762A1**
  - **Activation on Set (Manual or Inductive)**
- **MK 432**
  - **Activation at Gun Launch Required**
  - **Redundant Activation Methods:**
    - **Electrical Activation**
      - **Spin Switch Closure Initiates Battery Primer**
    - **Mechanical Activation**

Battery Activation

- **Mechanical Activation**
  - **Modified Actuating Rod Release Stab Pin Via Setback Force**
  - **Stab Pin Has Less Mass**
  - **Entire Stab Assembly Lubricated**
  - **Design Proven in Vertical Recovery Tests**



Timer Precision

- **M762**
  - **Settable to 199.9s**
  - **Set Resolution of 0.1 Seconds**
- **MK 432**
  - **Settable to 327.66s**
  - **Set Resolution of 0.01 Seconds**
  - **Greater Precision Needed for SuW Targets**
  - **System Errors Reduce Benefit at Long Range**

Other Changes

- **Eliminated Manual Set Capability**
- **Eliminated Point Detonating Backup Mode**
  - **MK 432 Will Dud in the Event of a Primary Mode Failure**
- **New Carbon Filled Ogive**
  - **Added Protection During Electromagnetic Environmental Effects**

Qualification

- 400 Fuzes Completed on 30 March
- First 10 Gun Fired at Yuma on 21 March
  - Only 10 Months from Contract Award
  - 9 Successful Firings, 1 No Test
- 60 Fuzes for EEE Testing
- 102 Fuzes for MIL-STD-331B
- Qualification Completed Summer 2001

Production

- Scheduled to Begin July 2001
- 14,600 Fuzes Delivery October 2001
- Old Fashion Build to Print Contract
  - No Performance Specification
- On Schedule for a Record Setting Delivery
  - 16 Months from PIP Contract to Completion of Production